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通讯地址：辽宁省大连市大连理工大学机械工程学院东楼

求职意向：机械工程师（研发）

## 教育背景

2018.9-2021.7	大连理工大学	机械工程学院	机械工程	硕士在读（10%）
2014.9-2018.7	浙江理工大学	机械与自动控制学院	机械设计制造及其自动化	工学学士（10%）

## 科研项目与科研成果

◆ 2019.07 至今 新型基准级齿轮渐开线样板的精密制造基础（国家重点研发计划） 核心成员  
研究生科研课题，国家重点研发计划（2018YFB2001402），旨在提高齿轮渐开线样板的加工与测量精度，开发出新型多功能基准级齿轮渐开线样板。基于纯滚动往复展成原理，研究纯滚动展成机构中基圆盘在导轨上滚动时的打滑产生机理与抑制方法、齿轮渐开线样板多齿面齿廓倾斜偏差的调控方法等科学问题，突破纯滚动展成机构中关键元件陶瓷基圆盘的内孔精密研磨和外径环抛加工、齿轮渐开线样板精密电解线切割及双面等研磨力研抛加工。本人负责通过环抛的方式对陶瓷基圆盘的外圆进行加工，对碳化硼油石的研磨特性进行实验分析，对碳化硼基底环抛机的环抛工艺进行理论分析。开发了一种新型高精度基圆盘外圆的加工方法，研究了一种以碳化硼为基底的新型环抛机，并发表两篇相关专利。

◆ 2018.10 至 2019.06 针对仿人机器人关节少齿差减速器的设计研究 主要成员  
研究生科研项目，要在五个月内设计制造出符合仿人机器人关节要求的少齿差行星减速器。在缺少时间和相关资料的情况下，进行了少齿差减速器特定传动比的齿数设计和减小干涉的齿形优化研究，并结合要求研究其减重问题，设计出了满足要求的新型减速器；设计了浮动轴式齿轮消隙机构，大大减小了减速器的回差。  
➢ 凌四营（导师），张慧阳，于宝地，凌明，刘瑞坤，高东辉. 一种用于微位移方向转换的双向测头装置  
➢ 凌四营（导师），张慧阳，于宝地，陈义磊，王立鼎. 一种基准级齿轮螺旋线样板  
➢ 凌四营（导师），张慧阳，宋金龙，高东辉，凌明，刘瑞坤. 一种环抛机用超硬磨盘和修正盘  
➢ 凌四营（导师），张慧阳，宋金龙，凌明，高东辉，刘瑞坤. 一种环抛机用大面积蜂窝状超硬磨盘和修正盘的制作方法

科研成果：国家发明专利八篇（四篇学生一作），国际发明专利一篇。

## 实习经历

2019.07-2019.09 秦川机床工具集团有限公司 智能装备研究所实习生  
学习通用数控车床及加工中心的操作、工作原理和机床调整；研究高精度齿轮的展成抛光方法和装置，抛光机理，装置结构，抛光工艺参数优化，齿面粗糙度测量，齿轮各项精度指标测试。

2017.07-2017.08 湖北十堰市东风风神发动机厂 生产实习生  
了解、熟悉东风风神发动机厂的发动机类型，掌握曲柄、连杆、箱体等的制造工艺以及发动机的组装与总装，丰富了实践经验，完善了理论知识在实践中的应用。

## 学生工作

- 文艺部部长：以丰富课余文体生活为宗旨，组织举办元旦晚会、十佳歌手等大型文娱活动。
- 机械制图助教：配合老师，独立进行机械制图作业的批改、成绩的统计以及上机的指导。
- 指导学术竞赛：指导本科生参加大连理工大学攀登杯课外学术竞赛，设计、购置、组装出一套可用于实验室研磨板对研的新型专用对研机，获得二等奖。

## 个人技能

- 专业技能：熟练掌握工程制图标准和表示方法以及公差配合的选用和标注；熟练掌握机械产品设计的基本知识与技能，能进行零、部件的设计；熟练掌握机械设计相关软件（CAD、CAXA、SolidWorks、UG、CREO、ANSYS）；具备机械结构设计、运动仿真、有限元分析和工程应用能力。
- 英语水平：CET-6，能够熟练进行英文科技资料阅读和日常对话交流。
- 计算机水平：掌握 C 语言，熟悉 C++、MATLAB 语言；熟练掌握 office 等应用办公软件。

## 所获奖励

- 校优秀学生干部，校级二等奖学金。

# Huiyang Zhang

Gender: Male

Date of Birth: 08/20/1996 Nationality: Chinese

Job Objective: Mechanical Design Engineer

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## Education Background

2018.9-2021.7	Dalian University of Technology	Mechanical engineering	Master reading (10%)
2014.9-2018.7	Zhejiang Sci-Tech University	Mechanical engineering	Bachelor of Engineering (10%)

## Projects

### 2019.07-now      The basis of precision manufacturing of new reference gear involute artifact

Postgraduate research project, National Key R&D Program (2018YFB2001402), aims to improve the processing and measurement accuracy of gear involute artifact, and develop a new type of multi-functional reference gear involute artifact. Study the mechanism and suppression method of slip generation when the base disc in the pure rolling generation mechanism rolls on the guide rail, and the control method of the inclination deviation of the multi-tooth profile of the gear involute artifact. Breakthrough the precision grinding of inner hole and outer diameter continuous polishing of the key components of the pure rolling forming mechanism, the precision electrolytic wire cutting of the gear involute artifact, and the double-sided grinding and polishing processing.

I am responsible for processing the outer circle of the ceramic base disc by continuous polishing, experimental analysis of the grinding characteristics of boron carbide whetstone, and theoretical analysis of the continuous polishing process of the boron carbide substrate continuous polishing machine. Developed a new type of high-precision base disk outer circle processing method, studied a new type of continuous polishing machine based on boron carbide, and published two related patents.

### 2018.10 to 2019.06      Design of the reducer with less tooth difference in humanoid robot joints

In the absence of time and related information, the design of the number of teeth for the specific transmission ratio of the small tooth difference reducer and the optimization of the tooth profile to reduce interference were carried out, and the weight reduction problem was studied in combination with the requirements, and a new type of speed reduction meeting the requirements was designed.

**Scientific research results: eight national invention patents, one international invention patent.**

## Internship

### 2019.07-2019.09      Qinchuan Machine Tool Group      Intelligent Equipment Institute

#### Intern

Learn the operation, working principle and machine tool adjustment of machining centers; study the generation and polishing methods and devices of high-precision gears, polishing mechanism, device structure, polishing process parameter optimization, tooth surface roughness measurement, gear precision indicators test.

### 2017.07-2017.08      Dongfeng Fengshen Engine Factory      Production

#### Intern

Understanding and familiarizing with the engine types of Dongfeng Fengshen Engine Factory, mastering the manufacturing process of cranks, connecting rods, boxes, etc., as well as engine assembly and assembly, enriches practical experience and perfects the application of theoretical knowledge in practice.

## Activities

**Director of the Arts Department:** To enrich the after-school recreational activities, organize and hold large-scale cultural and entertainment activities such as the New Year's Party and Top Ten Singers.

**Mechanical drawing assistant:** Cooperate with the teacher to independently carry out the correction of mechanical drawing homework, the statistics of grades and the guidance on the computer.

**Guiding academic competitions:** Guiding undergraduates to participate in the Dalian University of Technology Climbing Cup extracurricular academic competition and win the second prize.

## General skill

**Professional skills:** proficient in engineering drawing standards and representation methods, as well as selection and marking of tolerances; proficient in the basic knowledge and skills of mechanical product design, able to design parts and components; proficient in mechanical design related software (CAD, CAXA, SolidWorks, UG, CREO, ANSYS); possess mechanical structure design, motion simulation and finite element analysis capabilities.

**English proficiency:** CET-6, able to read sci-tech materials in English and daily dialogue and communication.

**Computer level:** familiar with C, MATLAB language; proficient in office and other application software.

## Awards

Outstanding student leader, School-level second-class scholarship.